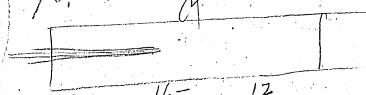
Notebook, N-01-07-01.2

This notebook contains dated entries from July 1901 and February 1903. All entries are by Edison. At the beginning of the book are notes and drawings relating to storage battery experiments. The following entries pertain to thermoelectric battery experiments, the production of electricity directly from coal, and experiments regarding potential unseen forces such as "xyz rays." Included is an idea for generating forces by substituting the iron core of a generator with other material, along with notations about methods for photographically recording these forces. Also included is an entry in which Edison proposes an experiment on the "6th sense," as well as an idea for recording phonograph cylinders by chemical action. Near the end of the book are drawings of what appears to be a cement processing or an ore milling plant and a one-page note for a traveling motion picture exhibition. The pages are unnumbered, and several pages have been removed from the book. Approximately 80 pages have been used.

680
24
2720
1360
16,320

20,000
40



13.

16
8
128

12
16
72

2000
192

25,000
200

40
20
800

1000
200

160

300 lbs

7.5 / 300 (40
225
75

40
200
250
4,500

11700 ft-min

54000
13
162000
54000
702000 (11700
60
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13 / 54000 (4153
52
23
130
65
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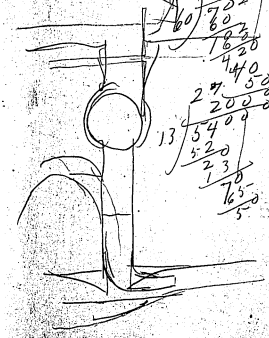
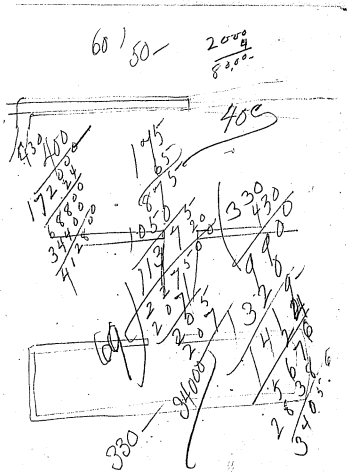




200 = Reduce ferric from oxalate by NH_3 –

201 Reduce ferric from oxalate by CO –

202 Reduce ferric from oxalate by boiling grape sugar or other reducing agents –

203 – 67 or 69 gwa – ~~two~~ nickel grids one new in closed jar – Charge 150 ma density on first charge + over charge then discharge 1 ampere + Recharge 1 ampere – etc + see what it does + get curves Duplicate the Cells in

204
205 use same from that known
206 to be good + give over 1100 Mah

207 } make 69 gwa 6+4 but put
208 } in enough to make 110-caliper
209 }

~~208~~

210 }
211 } 69 gwa 6+4 - enough to make
212 } 120 Caliper -

213 }
214 } 69 gwa 6+4 enough to make
215 } 130 Caliper -

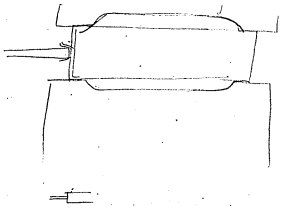
216 }
217 } 69 gwa 6+4 - water, regular
218 } roll + dry out on steam
plate the object is to get
more KOH in -

219
220
221 } 69 Gwa - 6+4 H_2O - but ~~rolled~~ ground very fine + rolled + rerolled a great many times, Examine under Microscope ~~between rollings~~

222
223
224 } 69 Gwa 6+4 - ground fine. H_2O dehydrated 212

225
226
227 } 69 Gwa 6+4 - Dehydrated to dark brown. ~~[illegible]~~ H_2O —

228
229
230. } 69 Gwa 6+4 H_2O Reg rolled but charged + discharged ~~to~~ worked in 40% KOH —



231
232
233

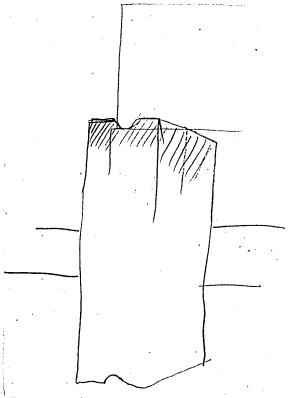
234 = get small grid cupola brick + crump edges in vise study the action alcohol shaved ~~to~~ Changed ~~to~~ make a Geller Crump

235 = try tiny flame on Molten KOH potash Sapphire - No

236 - try HFl. action on Sapphire No

237 Make some float sapphire that will stay in suspension in water for 1/2 hour - for polishing sapphire -

238 Dills Carborundum



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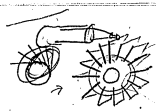
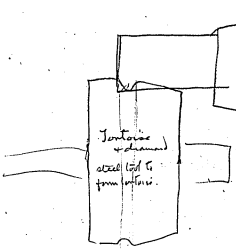


240 -

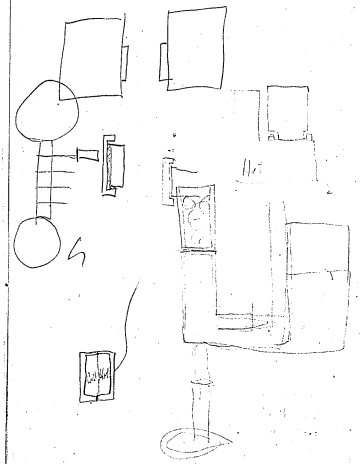
guard to hold cutting edge



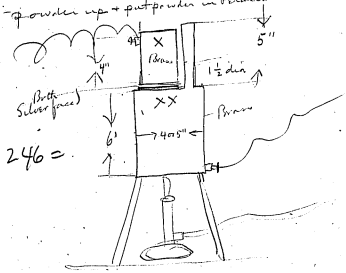
241 } 69 gra. 6 + 4 graphite plated
242 } lightly with Nickel
243 }

244 = Try plating Ni on the bright purified graphite - instead of on Dixons. ditto try silver —

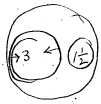
245 = Work up the Carbonate, Ammonia precipitate mixed with Nickel as it seems to give fine results, also the Carb Soda - find other Soluble salts Valuable Compounds - ~~also of~~ BaOH, SrOH, AlOH, ZnOH, MnOH, LiOH, Succinate & Benzoate KOH, Borate, Oleate or Oleic acid



Thermo Experiments H_2O Cold & hot
using anhydrous crystals. Get Hot & Cold Cycle
(Approx. temperature by finger)
also all X ray Crystals, some hydrated Crystals
powder up + put powder in Beaker



246 =



Top

24b Theory is that any of Impalpable Calcium used the heat will always the Crystal to a point when it will reach a certain point — then suddenly Continuous is given a charge like a Leyden jar — + these being thousands of grains, will get a Continuous Current from heat —

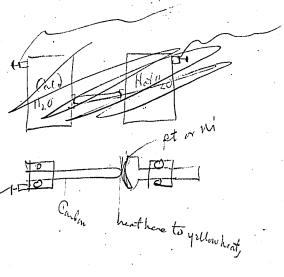
Try Journalme & all phosphorescing Crystals — also all phosphorescent — & Uranium salts, Oxalates

Lithium ite — Cu Ray

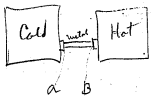
Oxalate Calcium — } Electric by heat.
" " Iron — } " " friction

palmatone. Bletts 80c Hyfley Electric

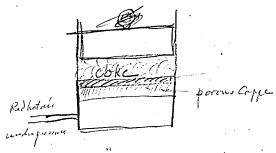
247 =

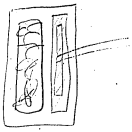


248 = Try thin films of oxides
sulphides phosphides of metals -

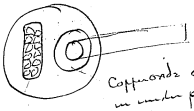


A clean
B oxidized etc
or there is ~~a~~ ~~some~~
some film of oxide etc
on the surface

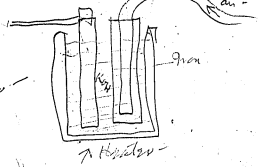




E derived from Coal

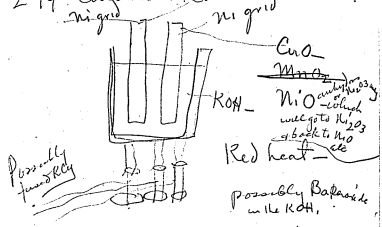


Nickel gas
with Coke packed - KOH solid
Whole jar of Iron heated fuse red
O of air OxCuto CuO + this is
reduced as formed by K of KOH
CO eliminated - small cell
2" dia will do for Experiment



Weight by
Rly also -

249 – Continued Coke



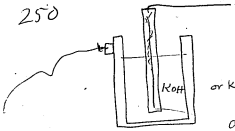
Use sheet Ni instead Iron

Rogers make some cups of Ni also holders –

Make Iron cell Ni plated about 2" dia + higher

Rey humblers –

250



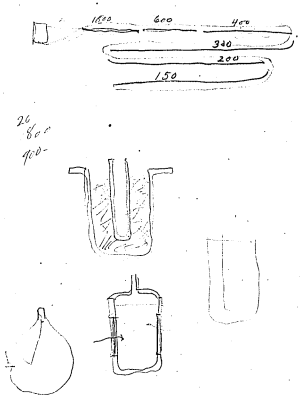
iron pot
KOH,
or KCy also
grid Fe_2O_3 anhydrous

Pot heated red hot

Cryolite $KClO_3$ KCl
Carb Soda

250 – Phosphate of tetramethylammonium is highly alkaline –

251 Magnesium acted on by Hydrogen peroxide forms a strong alkaline liquid



July 1 1901

252 – Try plating zinc from zincate consisting of CP ZnO in CP KOH. having no CO_2 & use Magnesium to plate on – Use closed cell

253, Make a grid of precipted ZnO_2H_2 ~~[illegible]~~ grid being made of Magnesium – 50/1000 thick & use ~~[illegible]~~ 10% Sol CP KOH in which alumina is dissolved to Saturation. Then reduce Zn to Metallic state use Ni Dzplg –

254 ~~[illegible]~~ 1/2
MnO – Aluminate KOH,
Zinc – Thick ~~[illegible]~~
~~[illegible]~~ Mn wont dissolve

Zinc
Ur
Mg
Pb
Bi
Cd
Cr
Co
Cu
same
Mn

254 Peroxide of acetyl – when dry, powerful Explosive, powerful oxidizer & probably good depolarizer – Easily made by dissolving Acetic Anhydride in pure ether & add Equivalent Quantity Perox Barium – See Oxygen Watts Rep Abs Vol 1 p 95

Peroxide Benzoyl OK

The anhydrides of Dibasic acids treated with Peroxide Ba form easily decomposed peroxides, for instance Succinic anhy – See Ox 319 –

255 Oxynaphthalamine, Easily made by dissolving Hydrochlorate of Naphthalamine in alcohol solution diluted but not enough to produce turbidity while whole is stirred add Ferric Chloride drop by drop added until slight excess while allowed stand & now repeatedly stirring

Ox

255 precip then collected & washed until Nit Silver gives no precip in wash water - then washed with Alcohol & dried in Vacuo -

its amorphous light, purple - when more simple like Iodine -

it does not combine with acids or alkalies - insol in KOH

I suppose the Cl from Ferric chl. dec. H_2O & the O oxdzs the H, Naphthalamine, This should be Cheap deptzr. for Leucoids & possibly reversible -

Oxysulphides -
Oxychlorides - deptzrs

256 = Write to somebody in Cuba & Porto Rico about Palm Waxes -

Try oxdgd anthracine, (10) by Nitric with NaOH for phono Cylinder - Oxdg Cheap Hydrocarbons with Nitric & then Wash & Combine with NaOH for putting on Phono Cylinder

Phenoic acid 388 Watts Reg

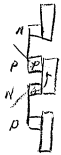
Try anilin residum W. have some

257 Phospham - PHN_2 — decomposed only by fusing with KOH,

258. Chloronitride of Phos

Hypophosphites are interesting with phosphite

259 Ni Salt at 100 decompose gives off H & deposits Metallic Nickel



July 3 1907

260 - Think KOH saturated with Ammonia is going to be a good electrolyte

~~Try Carbon Cathode with graphite & Zn powder~~

261. ~~Ammonia~~

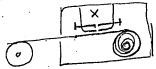
~~Potassium~~

~~Try Aluminum plate~~

261 - decompose acetate Nickel in Vac by heat & absorb the acetic by phos acid or KOH, this may leave Nickel Ox is an active form for battery

Decompose acetate or formate Nickel in Vacuo by heat + absorb the acid by solid reagent, leaving metallic Nickel possibly in a finely divided state that it will be active. in Storage Bat.
Hypophosphite Ni deposits metal at 100 C.

New Recorder idea –



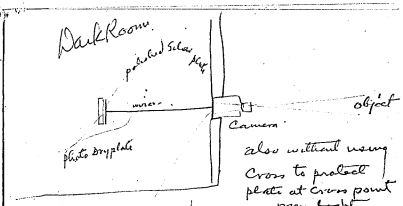
Dark Room

Band paper coated with Balmain Phosphorescent powder – box X containing sparking points, Source of light Vac tube – etc. small opening round hole 1/16 dia close to paper (10) touching – Now dots + dashes recorded by manipulating key + throwing light into box + short waves – all in dark room –
This principle is capable of wide application for galvanometers etc. in Experiment – as the paper can be used over + over, + the record Copied before it dies out,

MM

possibly the proximity of different materials to sparking point will give off emanations or rays invisible even to photography or eye that will control sparking not as Ultra Violet light does — also, Electrified body which is discharged by Radium or X ray could be used in connection with slides. The bottles containing the chemicals of the slides could be used removing some of the material & using off boys to make the test.

In some of the tests with the slides it may be necessary to remove the Mica as it may entirely absorb something that is to come out. This with off boy will not be very difficult Especially for photographing —



Idea being that light may cause transmission of a ray thro plate + Condenser in wire + expand out in 2nd plate + photo of time is given say 10 hours or more –

On the principle of Nernst's lamp it may be a good thermo could be got from a Conducting Sulphide in an atmosphere of Sulphur under pressure thus permitting high temp without decomposition of Sulphide. This will be true of any conducting Compound

and as many compounds become conducting when fused, + those which are prone to decomposition by heat + current will not do so in an atmosphere of the products of their decomposition it opens a wide field for a thermo battery — from semi or molten compounds between proper electrodes, one of which is at higher temperature than the other —

William X ray tube after use for few minutes + disconnected gives off invisible ray to photo plates,

Have Old Guy's break off piece of all Country Rock from samples up in Lab — granite, gneiss etc powders put on slides, also collect from grain at Sound Rock opp photo with all dif kind rock powder & also & and washed make slides — also those rare Alkaloids in leather sample case —

possibly plain glass, celluloid,
Mica, polished hard rubber would
act in place of a dry photo. plate,
the light sensitizing or changing
surface so if put in Vac or exposed in
air or sublimed chemicals adhered
to Come in Contact they would adhere
only where light acted or contra
possibly some liquids might wet
light acted parts or contra,
possibly polished metal plates
might be acted on so vapors
would act differently on dry parts
iodine, Hg - etc —
Metals might be enclosed in a
light shield like dry plate sensitized
+ Use in a vapor of a chemical
+ Camera used producing
a reaction bet polished surface
+ the Vapor — polished metal
plates might be used in place
Dry plate on slides some
dry from chemicals altering
surface possibly have holes Mica
out —

possibly in dark room a polished plate could be made one pole for a silent discharge & Ultra Violet beam thro quartz lenses focus picture on plate of Coil is weak no silent discharg take place except where light strikes hence action of discharg rather polish & we get photo

Will X ray affect a clinical thermometer —

Will X ray affect a very sensitive Hg thermometer & ditto a liquid therm — as therm with H_2O index —

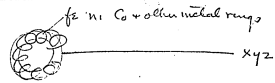
Hydroxylamine seems to be the most powerful reducer possibly dry plates of def things could be made that which not developable by ordinary developers would be by Hydroxylamine ~~Wm~~

possibly all metals are compounds
Except the magnetic metals Fe Ni Co.
& are connected to the Ether, whereas
iron Ni + Co are bare or centra —
is it true that alkali metals in high Vacuo
will give various colored films to
monochromatic light whereas Fe gives
black & possibly Ni + Co better than
films of all metals were & of Fe Co Ni
blacked prove to be the only ones gives
black films it will be of great
scientific fact,

Try depositing the films in mag field
also X ray field — also bulb in
Cod oil — also heated bulb —

If an iron Dynamo gives Elec
what would a Bismuth Dynamo
give — field of Bi + armature
Cons Bi — XYZ? —

If wire is wound on Bismuth closed
ring would be Rick by opposed
to that of iron —



Wound with Coarse wire + powerful alternating Current sent thro —
Think I have one made with iron wire insulated to form core with Cu wire outside the 2 ends of iron core going out + forming metallic Ckt for X y z
There should be something to route the Current (I) make it go one way — possibly wire should be formed of Fe + Cu in lengths so one turn would give a couple + then X y z would be directional

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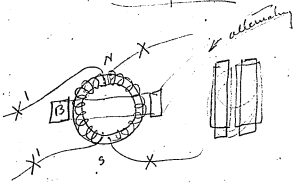
I think an Electrolytic Condenser Could be made that would Cancel out one alternation + give rayes that Current, like that Linseed paper Condr but should be of metals + insulated with proper Electrolyte — could discover

proper conditions by immersed electrodes say in KOH solutions would be practicable for low volt alternating —



B Coil with alternations making one part ring N other S,
Ring of steel permanently magnetized strong as possible
is there any way to connect
XX X'X' to get continuous
Current.

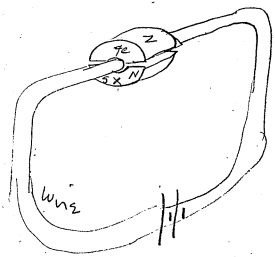
probably if one Current from
the Coil is cancelled out, or a 2000 Volt
battery ~~C~~ used or pures of metals
in Vac tubes used that it will
be found that certain metals
are torn off & deposit ~~by~~ as
films by Current in one direction
while others may be thrown
off only by Current in opposite
direction — Thus Experiment should
be tried as it may turn out
that Fe Ni Co might give films
only from Neg C while all others
give only from P Current, but
it may also turn out that all
metals which in Cell go from
anode to Cathode would form
films only P Current whereas Non
metallic elements would form
films only by Neg Current
this would be a great Experiment.

Selenium Tellurium Crystal block
Sulphur arsenic Iodine possibly
as alloy — for sparking points
in Vacuo —

X Electrode of metal disk coated
entirely by any shellac Rosin
gutta percha etc + make long
so heat in sealing will not
affect it — both metals
same sec phenomenon —
Then make disks of Cu with
CuO on + coated with dif things
like Rosin etc + other metals
Zinc Cd etc also coated,
also not coated —

Substitute iron cores in coils
with Non metallic Elements.
get Kick — also 1/2 a closed
ring with metallic other 1/2
non metallic Element for instance
Fe Cu or Se Ag or Ar Cu
Etc — see phenomena —

As C dis in red hot iron-Zn
also amalgamates, Make hot
iron plates like Condensers
C Fe Zn C Fe Zn Heat to red
out Contact are + see if get
Current, or Fe + C only (1c)
C Fe C Fe C Fe Etc. Separated
or Connected [illegible] + so on
Could pack in ashes and
if Cementation gives Current,



If X in position as so gives N + S take it away + leave Z what polarity will it have If rotating X around it change its polarity then the Etheric lines converge to the Center of Every circuit, — Curious!

A good Commercial generator of Oxyhydrogen gas would be say in Reg cell 50 plates of plated welded Ni steel, in 20% KOH, with large Dry - this would do for Laboratory Theatres Kinetics Etc - very practical device no elaboration - plates 15/1000 or 10/1000 slightly Compact + superimposed - storage battery to work it.

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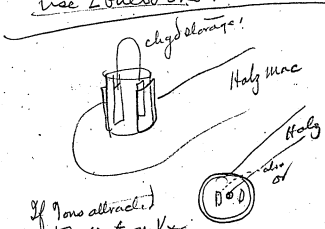
possibly two glass plates warm with warm solution of Chemicals between + pressed together so as to leave very thin film - will on cooling Crystalize - before Crystallizing Coated be electrically charged also X ray + mag + ultraviolet light Etc.

also 1/2 of glass with one Chem other half another Chem + progress of reaction watched in electrolyte X + mag + ultra

possibly a glass plate coated
chlag the chlag fused in
atmos of chlorine to glass
+ then coated with gelatin
+ photo taken, this would
give sharper result.
~~Could a reducing agt be used~~

Will phosphorus last
longer in Vac than in
air
use 2 bulbs one Vac



If ions attracted
try effect on V + amp
of electrification

Better put say 50 slides out on table + with arc - try powders in boxes of one of def metals Compounds to get specific light + then try next 50 until all tried for this particular powder + light for fluorescence + phos also thru opaque in fluoroscope box. because some Compounds in arc may send out a ray which go thru opaque paper. Try all slides thru then change to def powder

Feby 13 1903

Try experiments on 6th sense etc

2 persons series with 10 volt battery in series, read writing by one on paper, to be ready by the other,

electric, magnetic current - Ultra violet, one insulated other not -

Vibrated E from Coil - left hand one right of other group - & numerous changes - try several persons

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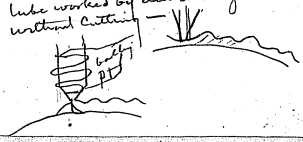
possibly a capillary tube of thick film dope could be bz connected to diaphm & the thread of dope run out & soundrecord made by throwing it in waves, or being blown to act surface - also the surface could be flown over & when reach a certain state record made by displacement,

Feby 13 1903

It is possible that film dopa could be used as a base to dissolve other amorphous substances in as acetate amyl is good solvent for organic materials & a compound got that would be just the thing for cutting records — Camphor, Metacinnamene, Resins, ~~Aluminate~~ Stearate Aluminum Oleate Aluminum & ditto Stearate & Oleate Mag — Waxes, Soaps, etc, Chloral Hydrate,

Possably a Capillary tube of molten wax kept warm by plate with steam and when wax starts Cylinder & Capillary tube worked by disc would give record without cutting —



add to last of film materials
peas soap ~~dipped in alc~~
by dipping plate in hot
alcohol & soap film thin
or can burn —
paper in hot Linseed at
certain stage changes to
Elastic — at least Gamboge
fels did —

Birch bark —
Lace wood —
Certain Seaweeds
Tracing Cloth —
Sulphide Moly Edenum —
Rind of the Cactus.

Ent

825
24
330
1650
1980

198
24
792
396
154

162
129

32
16
192
384
768

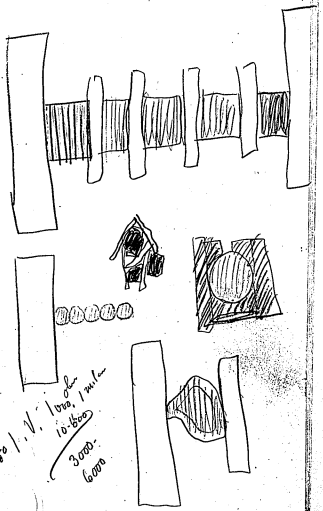
32
16
192
32
512
480

55
13
275
55
715

100
600
60,000

24
270
540
1080
10800
1080

2 volts 1 - 2 amp
2000
100 000
1 mil amp



20

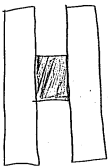
4800
1250
6000
750

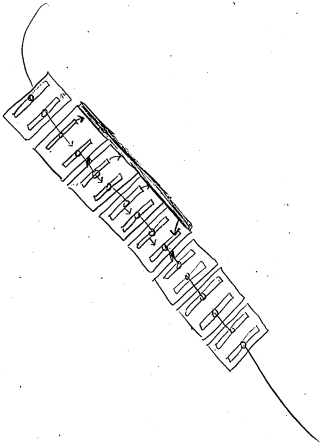
1. N. 1000 ft
1000 1 mil
10,800
3000
6000

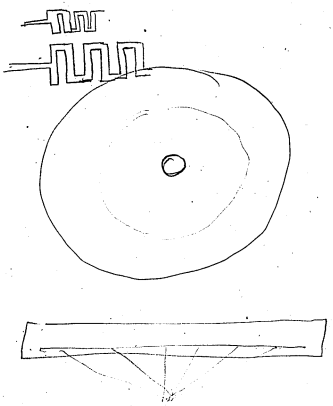
147-

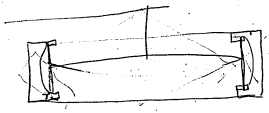
75

170
75
95









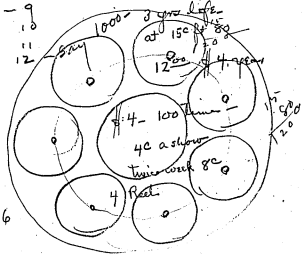
3000 tours twice a week

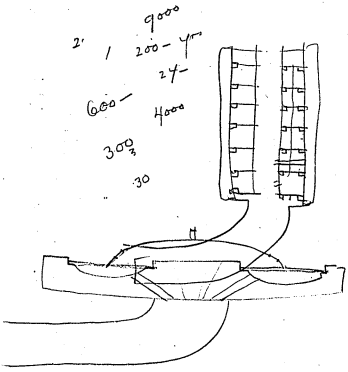
First 2 months — with 10 Travellers
2 per week. 20 week 80 1st month

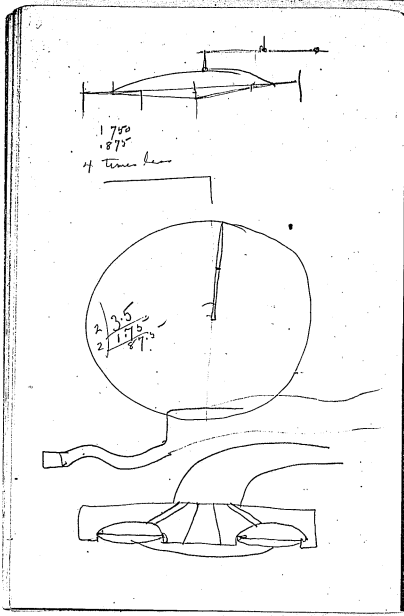
80 1
160 — 2nd month 2
240 3
320 4
400 — 5
480 6
560 — 7
640 — 8
720 — 9
800 10
880 11
960 12

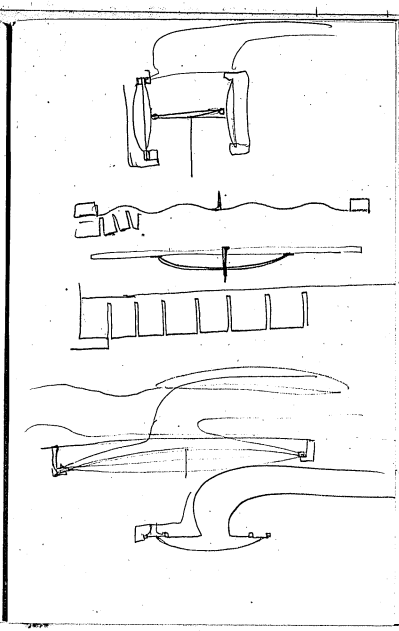
Start with 24 subjects

3000 times worn out
2 Reels at 2 each shows
100 times a year
twice a week.



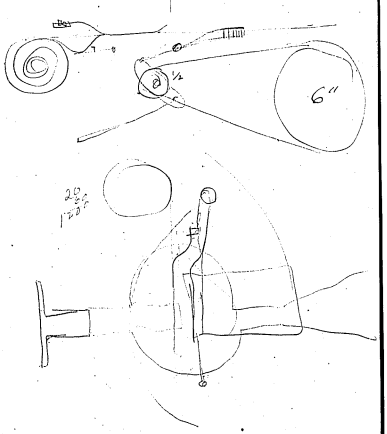



.750
.875
4 times here
2 | 3.5
2 | 1.75
.875



Coil
Rod

K-OH
H_3N



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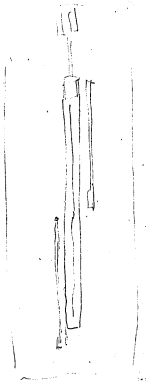
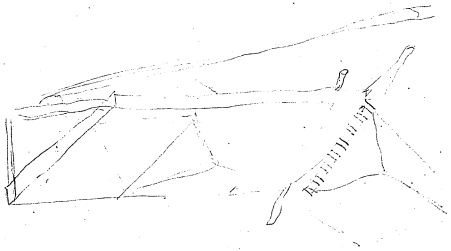
4 150/90 T

10

6000





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12 50
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8334
33328

225
21 / 705
39
21 19
21 19
2326

7.05
2.33
2 / 4713
2565

6.60.

4 / 850
21 25
8 50
21 25
5 3 25

850
4 / 3400
40
85
255

36 / 240
6 60
24

6.66

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46 8

24000
2340
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5 28
1 32

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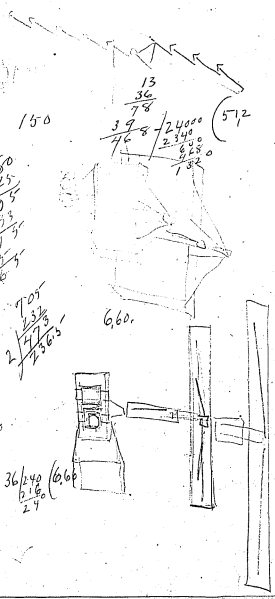
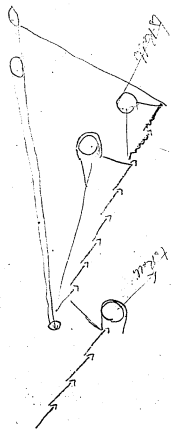




o y e h

—

ɔHMATHBTHMA

ABMTAHBATMATHA

ABM

13 – 14

BAMATH

Akamat MAM

HAMMABAT

12 ~~HAT~~

13 ~~HA~~ 1

14 ~~TAT~~ (Hi for tat.)

15 ~~HATH~~

16 AH. 1

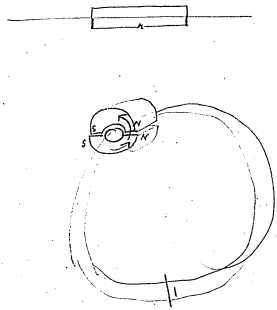
17 ~~BAH.~~ 1

18 MAMA 1

19 ~~HABATAT~~

20 BABA ✓ ab.

21 ~~MAB~~ 1 Queen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American Phonograph Co

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192
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